CLAIMS

1. A method of forecasting a staffing requirement necessary to handle forecasted contacts received of a contact type, the method comprising the steps of:

5   propagating the forecasted contacts received in proportion to a propagation value assigned to each of a predetermined number of periods; and

forecasting the staffing requirement necessary to handle the propagated forecasted contacts

10   received.

2. The method of Claim 1, wherein the propagation values are assigned to achieve at least one of a front-weighted curve, a back-weighted curve, a bell curve, flat curve, a multi-level service goal, an average speed of

15 answer, and a custom distribution.

3. The method of Claim 1, wherein the step of propagating the forecasted contacts received further comprises:

determining which periods can receive allocations

20   for the contact type, each period being assigned a propagation value; and

allocating the forecasted contacts received to the current period by the substeps of:

summing the propagation values from each period

25   that can receive allocations;

calculating "contacts to propagate from the past period" as the product of the forecasted contacts received for the past period and a service goal for the past period;

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calculating "contacts to propagate to the current period" as the product of the "contacts to propagate from the past period" and the quotient of the propagation value of

5   the current period divided by the sum of propagation values; and

allocating the "contacts to propagate to the current period" to the current period.

4.   The method of Claim 1, wherein the step of
10   calculating the staffing requirement for the current period is performed with reference to "ContactsHandled," "AHTinSeconds," and "SecondsInStatPeriod."

5.   The method of Claim 1, wherein the step of calculating the staffing requirement for the current
15   period is performed according to the equation:

$$\text{Staffing Requirement} = \left(\frac{\text{ContactsHandled} \times \text{AHTinSeconds}}{\text{SecondsInStatPeriod}} \right)$$

wherein:

"ContactsHandled" is equivalent to the "contacts to propagate to the current period";

20   "AHTinSeconds" is the average handling time for the contact type; and

"SecondsInStatPeriod" is the length in seconds of the current period.

6.   The method of Claim 5, wherein the staffing
25   requirement is further divided by the quotient of a maximum occupancy goal percent divided by 100.

7.   A method of forecasting a staffing requirement necessary to handle forecasted contacts received of a contact type, the method comprising the steps of:

determining whether the contact type is an immediate

5   contact type or a non-immediate contact type;

upon a determination that the contact type is an immediate contact type, calculating the staffing requirement in order to resolve the forecasted contacts within a predetermined amount of time;

10   and

upon a determination that the contact type is a non-immediate contact type, calculating the staffing requirement by performing the substeps of:

propagating the forecasted contacts received in

15   proportion to a propagation value assigned to each of a predetermined number of periods; and calculating the staffing requirement necessary to handle the propagated forecasted contacts received.

20   8.   The method of Claim 7, wherein the propagation values are assigned to achieve at least one of a front-weighted curve, a back-weighted curve, a bell curve, flat curve, a multi-level service goal, an average speed of answer, and a custom distribution.

25   9.   The method of Claim 7, wherein the step of propagating the forecasted contacts received further comprises:

determining which periods can receive allocations for the contact type, each period being assigned a

30   propagation value; and

allocating the forecasted contacts received to the
current period by the substeps of:
summing the propagation values from each period
that can receive allocations;
5   calculating "contacts to propagate from the past
period" as the product of the forecasted
contacts received for the past period and a
service goal for the past period;
calculating "contacts to propagate to the
10   current period" as the product of the
"contacts to propagate from the past period"
and the quotient of the propagation value of
the current period divided by the sum of
propagation values; and
15   allocating the "contacts to propagate to the
current period" to the current period.

10.   The method of Claim 7, wherein the step of
calculating the staffing requirement for the current
20   period is performed with reference to "ContactsHandled,"
"AHTinSeconds," and "SecondsInStatPeriod."

11.   The method of Claim 7, wherein the step of
calculating the staffing requirement for the current
period is performed according to the equation:

25      $$\text{Staffing Requirement} = \left(\frac{\text{ContactsHandled x AHTinSeconds}}{\text{SecondsInStatPeriod}} \right)$$

wherein:
"ContactsHandled" is equivalent to the "contacts to
propagate to the current period";

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"AHTinSeconds" is the average handling time for the
contact type; and

"SecondsInStatPeriod" is the length in seconds of
the current period.

5   12. The method of Claim 11, wherein the staffing
requirement is further divided by the quotient of a
maximum occupancy goal percent divided by 100.

13. A method for determining the total, non-
immediate, multimedia contacts in a period within a
10   range, comprising, for each contact type and for each
period in the range, wherein the period is a current
period and each period which precedes the current period
is a past period, the step of determining whether the
current period can receive allocations and, upon a
15   determination that the current period can receive
allocations, performing for each past period affecting
the current period the substeps of:

calculating a "total contacts to propagate from past
period" as the product of a forecasted "contacts
20   received" from the past period and a "service
percent" for the past period;

calculating a "contacts propagated to current
period" as the product of the "total contacts to
propagate from past period" and the quotient of a
25   propagation value of the current period divided by
the sum of propagation values for all periods
affected by the past period; and

summing the "contacts propagated to current period"
into the "total contacts to handle in current
30   period" for all contact types.

14. An apparatus for forecasting a staffing requirement necessary to handle forecasted contacts received of a contact type, the apparatus comprising:

5   means for propagating the forecasted contacts received in proportion to a propagation value assigned to each of a predetermined number of periods; and

       means for forecasting the staffing requirement necessary to handle the propagated forecasted
10   contacts received.

15. The apparatus of Claim 14, wherein the propagation values are assigned to achieve at least one of a front-weighted curve, a back-weighted curve, a bell curve, flat curve, a multi-level service goal, an average
15 speed of answer, and a custom distribution.

16. The method of Claim 14, wherein the means for propagating the forecasted contacts received further comprises:

       means for determining which periods can receive
20   allocations for the contact type, each period being assigned a propagation value; and

       means for allocating the forecasted contacts received to the current period, comprising:

        means for summing the propagation values from
25   each period that can receive allocations;

        means for calculating "contacts to propagate from the past period" as the product of the forecasted contacts received for the past period and a service goal for the past period;

means for calculating "contacts to propagate to
the current period" as the product of the
"contacts to propagate from the past period"
and the quotient of the propagation value of
5   the current period divided by the sum of
propagation values; and
means for allocating the "contacts to propagate
to the current period" to the current period.

17. The apparatus of Claim 14, wherein the means
10   for calculating the staffing requirement for the current
period is performed with reference to "ContactsHandled,"
"AHTinSeconds," and "SecondsInStatPeriod."

18. The apparatus of Claim 14, wherein the means
for calculating the staffing requirement for the current
15   period is performed according to the equation:

$$\text{Staffing Requirement} = \left(\frac{\text{ContactsHandled} \times \text{AHTinSeconds}}{\text{SecondsInStatPeriod}} \right)$$

wherein:
"ContactsHandled" is equivalent to the "contacts to
propagate to the current period";
20   "AHTinSeconds" is the average handling time for the
contact type; and
"SecondsInStatPeriod" is the length in seconds of
the current period.

19. The apparatus of Claim 18, wherein the staffing
25   requirement is further divided by the quotient of a
maximum occupancy goal percent divided by 100.

20. An   apparatus   for   forecasting   a   staffing
requirement   necessary   to   handle   forecasted   contacts
received of a contact type, the apparatus comprising:
    means for determining whether the contact type is an
        immediate contact type or a non-immediate contact
        type;
    upon a determination that the contact type is an
        immediate contact type, means for calculating the
        staffing requirement in order to resolve the
        forecasted   contacts   received   within   a
        predetermined amount of time; and
    upon a determination that the contact type is a non-
        immediate contact type, means for calculating the
        staffing requirement comprising:
        means for propagating the forecasted contacts
            received in proportion to a propagation value
            assigned to each of a predetermined number of
            periods; and
        means for calculating the staffing requirement
            necessary to handle the propagated forecasted
            contacts received.

21. The   apparatus   of   Claim   20,   wherein   the
propagation values are assigned to achieve at least one
of a front-weighted curve, a back-weighted curve, a bell
curve, flat curve, a multi-level service goal, an average
speed of answer, and a custom distribution.

22. The apparatus of Claim 20, wherein the means
for propagating the forecasted contacts received further
comprises:

means for determining which periods can receive
allocations for the contact type, each period
being assigned a propagation value; and

means for allocating the forecasted contacts

5   received to the current period comprising:

means for summing the propagation values from
each period that can receive allocations;

means for calculating "contacts to propagate
from the past period" as the product of the

10   forecasted contacts received for the past
period and a service goal for the past period;

means for calculating "contacts to propagate to
the current period" as the product of the
"contacts to propagate from the past period"

15   and the quotient of the propagation value of
the current period divided by the sum of
propagation values; and

means for allocating the "contacts to propagate
to the current period" to the current period.

20   23.   The apparatus of Claim 20, wherein the means
for calculating the staffing requirement for the current
period is performed according to the equation:

$$\text{Staffing Requirement} = \left(\frac{\text{ContactsHandled x AHTinSeconds}}{\text{SecondsInStatPeriod}} \right)$$

wherein:

25   "ContactsHandled" is equivalent to the "contacts to
propagate to the current period";

"AHTinSeconds" is the average handling time for the
contact type; and

"SecondsInStatPeriod" is the length in seconds of the current period.

24. The apparatus of Claim 25, wherein the staffing requirement is further divided by the quotient of a maximum occupancy goal percent divided by 100.

25. An apparatus for calculating the total, non-immediate, multimedia contacts in a period within a range, comprising, for each contact type and for each period in the range, wherein the period is a current period and each period which precedes the current period is a past period, the apparatus comprising means for determining whether the current period can receive allocations and, upon a determination that the current period can receive allocations, for each past period affecting the current period:

means for calculating a "total contacts to propagate from past period" as the product of a forecasted "contacts received" from the past period and a "service percent" for the past period;

means for calculating a "contacts propagated to current period" as the product of the "total contacts to propagate from past period" and the quotient of a propagation value of the current period divided by the sum of propagation values for all periods affected by the past period; and

means for summing the "contacts propagated to current period" into the "total contacts to handle in current period" for all contact types.

26. A computer program product for forecasting a staffing requirement necessary to handle forecasted contacts received of a contact type, the computer program product having a medium with a computer program embodied thereon, the computer program comprising:

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computer program code for propagating the forecasted contacts received in proportion to a propagation value assigned to each of a predetermined number of periods; and

10

computer program code for calculating the staffing requirement necessary to handle the propagated forecasted contacts received.

27. The computer program product of Claim 26, wherein the propagation values are assigned to achieve at 15 least one of a front-weighted curve, a back-weighted curve, a bell curve, flat curve, a multi-level service goal, an average speed of answer, and a custom distribution.

28. The computer program product of Claim 26, 20 wherein the computer program code for propagating the forecasted contacts received further comprises:

computer program code for determining which periods can receive allocations for the contact type, each period being assigned a propagation value; and

25

computer program code for allocating the forecasted contacts received to the current period comprising:

computer program code for summing the propagation values from each period that can 30 receive allocations;

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computer program code for calculating "contacts
    to propagate from the past period" as the
    product of the forecasted contacts received
    for the past period and a service goal for the
5   past period;
computer program code for calculating "contacts
    to propagate to the current period" as the
    product of the "contacts to propagate from the
    past period" and the quotient of the
10   propagation value of the current period
    divided by the sum of propagation values; and
computer program code for allocating the
    "contacts to propagate to the current period"
    to the current period.
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29. The computer program product of Claim 26,
wherein the computer program code for calculating the
staffing requirement for the current period is performed
according to the equation:

$$\text{Staffing Requirement} = \left(\frac{\text{ContactsHandled x AHTinSeconds}}{\text{SecondsInStatPeriod}} \right)$$

wherein:
"ContactsHandled" is equivalent to the "contacts to
    propagate to the current period";
"AHTinSeconds" is the average handling time for the
25   contact type; and
"SecondsInStatPeriod" is the length in seconds of
    the current period.

30. The computer program product of Claim 29,
wherein the staffing requirement is further divided by
the quotient of a maximum occupancy goal percent divided
by 100.

5   31. A computer program product for forecasting a
staffing   requirement   necessary   to   handle   forecasted
contacts received of a contact type, the computer program
product having a medium with a computer program embodied
thereon, the computer program comprising:

10   computer program code for determining whether the
         contact type is an immediate contact type or a
         non-immediate contact type;
      upon a determination that the contact type is an
         immediate contact type, computer program code for
15   calculating the staffing requirement in order to
         resolve the forecasted contacts received within a
         predetermined amount of time; and
      upon a determination that the contact type is a non-
         immediate contact type, computer program code for
20   calculating the staffing requirement comprising:
         computer   program   code   for   propagating   the
            forecasted contacts received in proportion to
            a propagation value assigned to each of a
            predetermined number of periods; and
25   computer   program   code   for   calculating   the
            staffing requirement necessary to handle the
            propagated forecasted contacts received.

32. The computer program product of Claim 31, wherein the propagation values are assigned to achieve at least one of a front-weighted curve, a back-weighted curve, a bell curve, flat curve, a multi-level service goal, an average speed of answer, and a custom distribution.

33. The computer program product of Claim 31, wherein the computer program code for propagating the forecasted contacts received further comprises:

computer program code for determining which periods can receive allocations for the contact type, each period being assigned a propagation value; and

computer program code for allocating the forecasted contacts received to the current period comprising:

computer program code for summing the propagation values from each period that can receive allocations;

computer program code for calculating "contacts to propagate from the past period" as the product of the forecasted contacts received for the past period and a service goal for the past period; and

computer program code for calculating "contacts to propagate to the current period" as the product of the "contacts to propagate from the past period" and the quotient of the propagation value of the current period divided by the sum of propagation values.

34.   The   computer   program   product   of   Claim   31,
wherein the computer program code for calculating the
staffing requirement for the current period is performed
according to the equation:

$$\text{Staffing Requirement} = \left(\frac{\text{ContactsHandled x AHTinSeconds}}{\text{SecondsInStatPeriod}} \right)$$

wherein:
"ContactsHandled" is equivalent to the "contacts to
    propagate to the current period";
"AHTinSeconds" is the average handling time for the
    contact type; and
"SecondsInStatPeriod" is the length in seconds of
    the current period.

35.   The   computer   program   product   of   Claim   34,
wherein the staffing requirement is further divided by
the quotient of a maximum occupancy goal percent divided
by 100.

36.   A computer program product for calculating the
total, non-immediate, multimedia contacts in a period
within a range, for each contact type and for each period
in the range, wherein the period is a current period and
each period which precedes the current period is a past
period, the computer program product having a medium with
a computer program embodied thereon, the computer program
comprising:
    computer program code for determining whether the
        current period can receive allocations and, upon a
        determination that the current period can receive

allocations, performing for each past period affecting the current period:

computer program code for calculating a "total contacts to propagate from past period" as the product of a forecasted "contacts received" from the past period and a "service percent" for the past period;

computer program code for calculating a "contacts propagated to current period" as the product of the "total contacts to propagate from past period" and the quotient of a propagation value of the current period divided by the sum of propagation values for all periods affected by the past period; and

computer program code for summing the "contacts propagated to current period" into the "total contacts to handle in current period" for all contact types.